CLAIMS

1. An antivibration device of the type comprising at least two sets (2, 3) each comprising two identical rotors (4, 5; 6, 7) having respective eccentric flyweights (4A, 5A; 6A, 7A), said sets being disposed symmetrically about an axis of symmetry, and the axes of rotation of said rotors being parallel to one another and orthogonal to said axis of symmetry, and a drive system (8) for setting said rotors into rotation,

the device being characterized:

· in that it comprises controllable moving equipment (11) carrying said drive system (8) and capable of sliding along said axis of symmetry to vary the phase offset between the eccentric flyweight rotors of the sets; and

· in that said drive system (8) comprises a single motor (12) for rotating said rotors, having its axis disposed perpendicularly to said axis of symmetry, and driving an endless connection passing around said rotors (4, 5; 6, 7) so that the lengths of the strands of the connection passing through said sets are equal.

2. A device according to claim 1, characterized in that the phase offset φ between the eccentric flyweight rotors disposed symmetrically facing each other (4, 6; 5, 7) about the axis of symmetry is equal to $2d/r$, where d corresponds to the linear displacement of said moving equipment (11) along said axis of symmetry, and r corresponds to the identical winding radius of the endless connection about the centers of said rotors.

3. A device according to claim 1 or claim 2, characterized in that the linear displacement stroke of said moving equipment (11) is defined by two extreme positions, a first position in which the phase offset between the eccentric flyweight rotors is zero, and a

second position in which the phase offset is equal to 180°.

4. A device according to any one of claims 1 to 3, characterized in that it includes at least one servo-motor (19) for servo-controlling the position of said moving equipment (11), a plurality of sensors measuring the positions of said rotors for the purpose of calculating the phase offset between said sets, and a relationship for regulating and servo-controlling rotation of said single motor.

5. A device according to any one of claims 1 to 4, characterized in that said controllable moving equipment (11) is a carriage (18) sliding along said axis of symmetry and supporting said single motor (12).

6. A device according to any preceding claim 1 to 5, characterized in that said endless connection (14) is a belt that winds around pulleys (15) that are mounted on the axes of said rotors, and of said single motor, which pulleys are contained in a common plane.

7. A device according to the preceding claim, characterized in that said belt (14) is a cog belt and co-operates with corresponding teeth (15A) formed on said pulleys (15).

8. A device according to any preceding claim 1 to 7, characterized in that said controllable moving equipment (11) also includes at least one tensioning wheel (17) for tensioning said endless connection (14).

9. A device according to any one of claims 1 to 8, characterized in that the two sets (2, 3) are carried by a frame (9) suitable for being secured to a vibrating structure, said controllable moving equipment (11) being

slidably mounted on said frame (9) to slide along the axis of symmetry of the two sets (2, 3).

10. A device according to any preceding claim 1 to 9, characterized in that for each set (2, 3) of rotors, it includes an intermediate rotary wheel (16) co-operating with said endless connection (14) to ensure that the two rotors are driven in contrarotation, the two rotary wheels (16) being arranged on said frame (9) and being disposed respectively on either side of said axis of symmetry.